Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

DRAFT/ Renewal
Title V / Synthetic minor / Operating
Permit: V-08-036
Philips Lighting, LLC
Danville KY, 40422
September 28, 2008
Zari Hariri, Reviewer

SOURCE ID:	21-021-00001
AGENCY INTEREST:	380
ACTIVITY:	APE20080001

SOURCE DESCRIPTION:

Philips Lighting operates a glass manufacturing plant in Danville, Kentucky. Philips has three separate production lines for manufacturing three different types of glass: soda lime glass (commonly referred to as "lime glass" in application documents), lead glass, and hard glass. Recently, Philips Lighting Company decided to shut down the lime glass production line in Danville, effective January 2008.

Philips has taken several steps since January 2008 to either disassemble or otherwise deem inoperable all emission points associated with the lime glass production line. Of particular importance is the lime furnace. Philips has suggested that this furnace be removed from the Title V operating permit to be issued by DAQ. The shutdown of this furnace represents a significant decrease in criteria pollutant emissions from the factory; this decrease could be used to offset possible emissions increases at Philips during the next 5 years to preclude applicability of Prevention of Significant Deterioration (PSD).

On March 16, 2008, the source applied to the Division for the permit renewal for the facility located in Denville, Kentucky. The application requested a change in the permit for the removal of the Lime Glass line from the permit. Most of the idle equipments associated with the lime glass production line have already been removed out. The furnace will not be removed due to the cost of dismantling it. The lime glass line includes following equipments:

- EP 01: Lime Glass Mixing and Handling
- EP 03: Lime Glass Melt Furnace
- EP 06: Bulb Forming
- EP 07: Mold Coat Spray
- EP 08: Mold Cleaning Tank
- EP 13: Lime Cullet Conveying
- EP 17: Lehr Ovens
- EP 032: Mold Cleaning Tank

All of the emission points listed above have been physically removed from the plant, with two exceptions: the Lime Glass Melt Furnace and the Lehr Ovens (EP 03 and EP 17). The lime glass melt furnace (EP 03) has been shutdown and disabled. Per the facility, no equipment has been added since last permit.

COMMENTS:

02 (02) Lead glass batch mixing and handling

Description: Several types of raw material are received in bulk by railcar or trucks. The material is either transported pneumatically or with bucket elevators to storage silos in the mix house where it is held until measuring and mixing. The emissions are captured and vented to a bag house. Construction/ modification commenced: 1990

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations.

Control:

Particulate emissions are controlled by a bag house that has 99% design efficiency. Particulate emissions were estimated using the emission factor from KYEIS. The lead emissions were below the adjusted significant level of regulation 401 KAR 63:022.

04 (04) Lead glass melting furnace

Description: It is a natural gas side port regenerative melting furnace which produces lead glass for the manufacture of glass tubing. The furnace uses natural gas as primary fuel with propane as back up fuel.

The total heat input of the furnace burners is 30 million Btu/hr. Construction/ modification commenced: 1995

APPLICABLE REGULATIONS:

401 KAR 60:005 is governed by 40 CFR 60, Standards of performance for new stationary sources, Subpart CC, Standards of performance for glass manufacturing plants.

Control:

Particulate emissions from the lead glass melt furnace are controlled by an electrostatic precipitator with 95% design efficiency. Emission factors were obtained from AP-42. The lead emissions were tested and were found to be below the adjusted significant level of regulation 401 KAR 63:022..

14 (14) Lead glass crusher

Description: Particulate emissions from the lead glass crusher are controlled by a bag house. Construction commenced: 1969

APPLICABLE REGULATIONS:

401 KAR 61:020, Section 3(1)(a), Existing process operations applicable to each emission unit which commenced construction before July 2, 1975.

Control:

Particulate emissions and Pb are controlled by two bag houses with a 99% design efficiency. The particulate's emission factor used to estimate emissions was 20 lbs/ton.

22(22) Hard Glass Electric Furnace

Description: This is and electric furnace, so there is no combustion emission. The process operation for this furnace is 2.0 tons/hr.

Construction commenced: 2003

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations

Control:

There is no control for this equipment.

23(23) Lehr ovens (Hard Glass)

Description: The continuous annealing lehrs are used to relieve the stress. The combined heat

input for both ovens is 15 mm Btu /hr. Natural gas is the primary fuel with propane serving as a back up.
Construction commenced: 2003

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations

Control:

There is no control for this equipment.

EMISSION AND OPERATING CAPS DESCRIPTION:

Operation rate shall not exceed the following amounts for these emission points:

EP02 1.8 tons/hr
EP04 1.4 tons/hr
E14 4.25 tons/hr
EP22 2.0 tons/hr
EP23 the two Lehr ovens shall not use propane for more than 1850 hours/year.

Control system must be in operation for EPs 02, 04 and 14 during the normal operating process time.

PERIODIC MONITORING:

The plant shall monitor the following for a 12-month production total:

1) Raw materials
2) Hours of operation
3) Particulate emission
4) Monthly usage rates of cleaner and caustic.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.